

REMARKS/ARGUMENTS

Claims 1-10 are currently pending in this application. Claims 1-10 have been finally rejected under 35 U.S.C. 103 over the Ulrich US Patent 3,492,436. Claims 1 and 8 have been amended. Reconsideration of the claims as amended is requested.

The Applicants' attorney thanks the Examiner for the telephone interview of June 21, 2004. As indicated in the Interview Summary dated June 24, 2004, an agreement with respect to the claims was reached with a request for a full statement of the reasons the claims as amended are not obvious in view of the Ulrich patent.

By the present amendment, Claims 1 and 8 are limited to a an integrated services hub "on a customer premises" which supports a plurality of telephone circuits located "on the customer premises".

As noted by the Examiner in the Final Office Action dated April 27, 2004, the Ulrich patent teaches a method of ringing arrangement with variable intervals of ring cadence. However, the teachings of Ulrich all relate to a telephone company central office, not to a customer premises. The Ulrich patent was filed over 25 years ago. Since then no one has found its teachings applicable to a customer premises system. There is nothing in the Ulrich reference which would have suggested to one skilled in the art that the teachings of Ulrich should be used in a customer premises application. Thus the Applicants submit that the present invention was not obvious in view of Ulrich.

In the central office application of Ulrich, the amount of power available is effectively unlimited. Central offices normal have large backup generators if conventional grid power is lost. Thus there would be no reason to consider the use of offset ringing for saving power based on the teaching of Ulrich. However, in the customer premises application, available power is

limited, and backup power, if available, is limited to batteries. It is important to reduce power consumption in the customer premises application. The offset ringing system of the present invention helps reduce power requirements.

The generation of heat in the ringing circuits of a central office is not an important problem, since it is an industrial office environment where heat management equipment is available. The heat reduction achieved by use of lower power ringing circuits would not be significant in the central office application. But, in a customer premises application, for example in a home or business office, heat produced by the telephone equipment can be a real problem. By reducing the power consumption by use of offset ringing, the heat production is reduced.

The space requirements for telephone ringing circuits would again not be a problem in a central office application. A central office is designed to be filled with electrical and electronic equipment, cables, etc. for telephone services. However, on a customer premises, an integrated services hub needs to be as small as possible since it will occupy space that the customer may prefer to use for other purposes. Customer premises, especially private residences, are not normally designed to have a room for telephone equipment. Use of offset ringing according to the present invention allows the physical size of the circuits, including the power supply, to be reduced thereby reducing the overall size of the integrated services hub.

The Ulrich reference does not indicate that its system reduces power consumption, or heat dissipation or reduces the size of the equipment. Thus, none of the reasons for the present invention are suggested by Ulrich. The only benefit stated by Ulrich is to “permit the ringing control circuit to serve more customer lines” (Col. 3, lines 28-29) and to increase “the capacity of the ringing control circuit” (Col. 6, lines 61-62). Since a central office is designed to handle thousands of telephone circuits, it appears that the main benefit in increasing the capacity of the

circuits would be to reduce the capital expense otherwise required to build or buy thousands of ringing circuits. It is likely that the Ulrich system was actually the result of the invention of the central processor which allowed the high speed control of ringing circuits as described in Ulrich. In a customer premises application, there are only a few telephone circuits and only one or two ringing circuits will normally be needed. Since such circuits are now implemented primarily in general purpose circuits controlled by software, the reduction in capital expense would be minimal.

In summary, the Applicants submit that the teachings of Ulrich are limited to a central office application and nothing in Ulrich suggests that its teachings are applicable to the customer premises application. The Applicants therefore submit that Claims 1-10, as amended, are allowable over the Ulrich reference.

The Commissioner is hereby authorized to charge payment of any further fees associated with any of the foregoing papers submitted herewith, or to credit any overpayment thereof, to Deposit Account No. 21-0765, Sprint.

Applicants respectfully submit that the present application as amended is in condition for allowance. If the Examiner has any questions or comments or otherwise feels it would be helpful in expediting the application, he is encouraged to telephone the undersigned at (972) 731-2288.

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